

# Clinical Engagement Leads to Actionable Insights

Our Qlik Data Discovery programme kicked off in early 2017 with a mandate from our CEO to have a clinical focus. The aim was to support the work underway by our clinical teams to identify clinical metrics and develop clinical pathways. We established a core principle that every app developed would have a clinical lead, and would involve other clinicians during the development and testing phases.

## Emergency Department (ED) Explorer

One of the first Qlik Sense apps developed was our ED Explorer in collaboration with a Paediatric Emergency Specialist. With his input and the involvement of other clinicians we have been able to model the information they see in their clinical systems into the ED Explorer. Over the last two years the app has significantly evolved to meet their increasingly complex clinical questions.

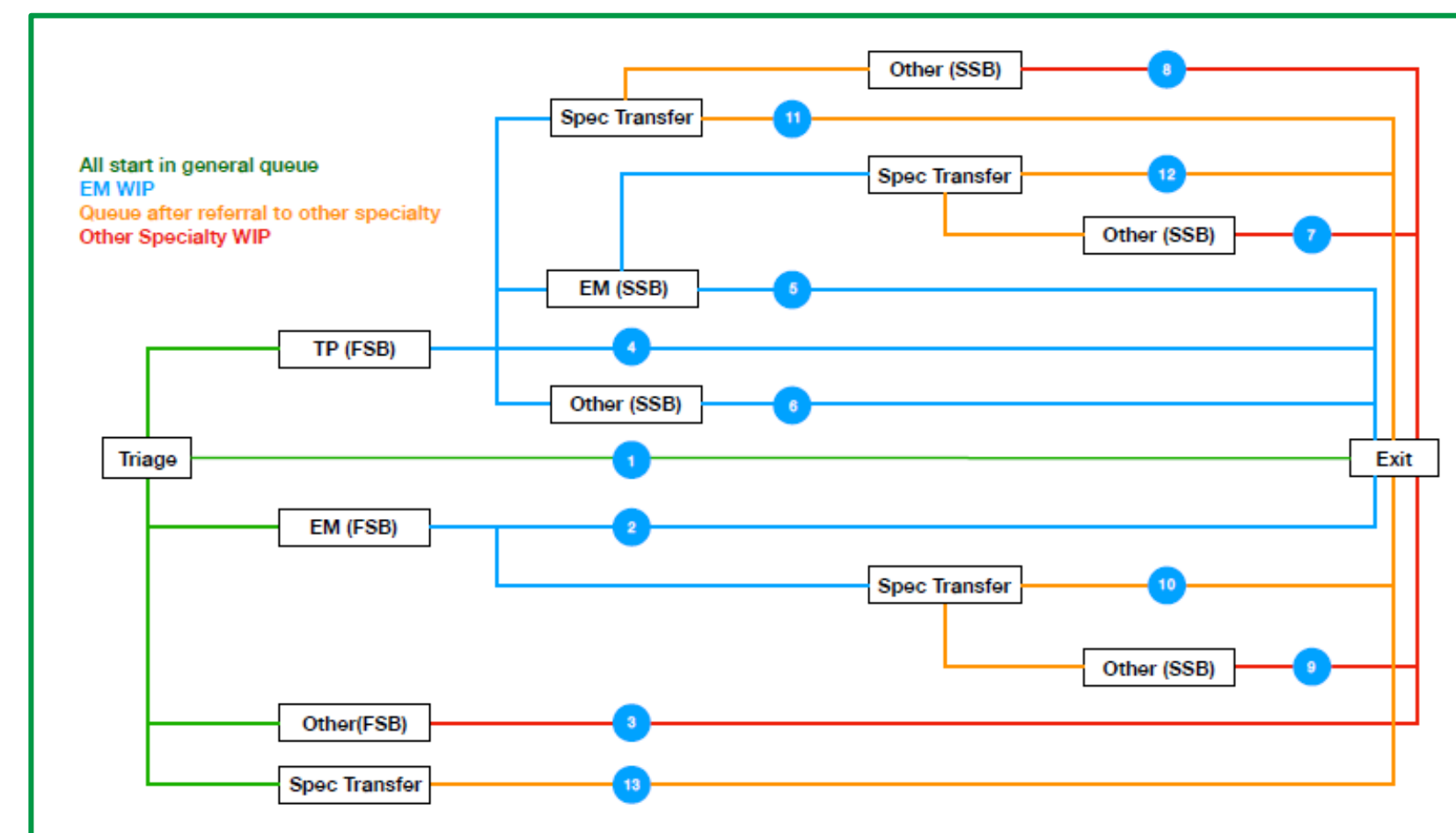
### Patient Flow

A common problem in EDs is trying to understand patient flow - how long are patients waiting or in the department before a disposition decision is made?

In real-time our EDs our clinicians can see the status for each patient on an electronic whiteboard. When this data became available in an early version of the ED Explorer we were able to identify 13 distinct patient pathways (which can be filtered to a single patient's journey) and overall patient pathway in the ED Explorer.

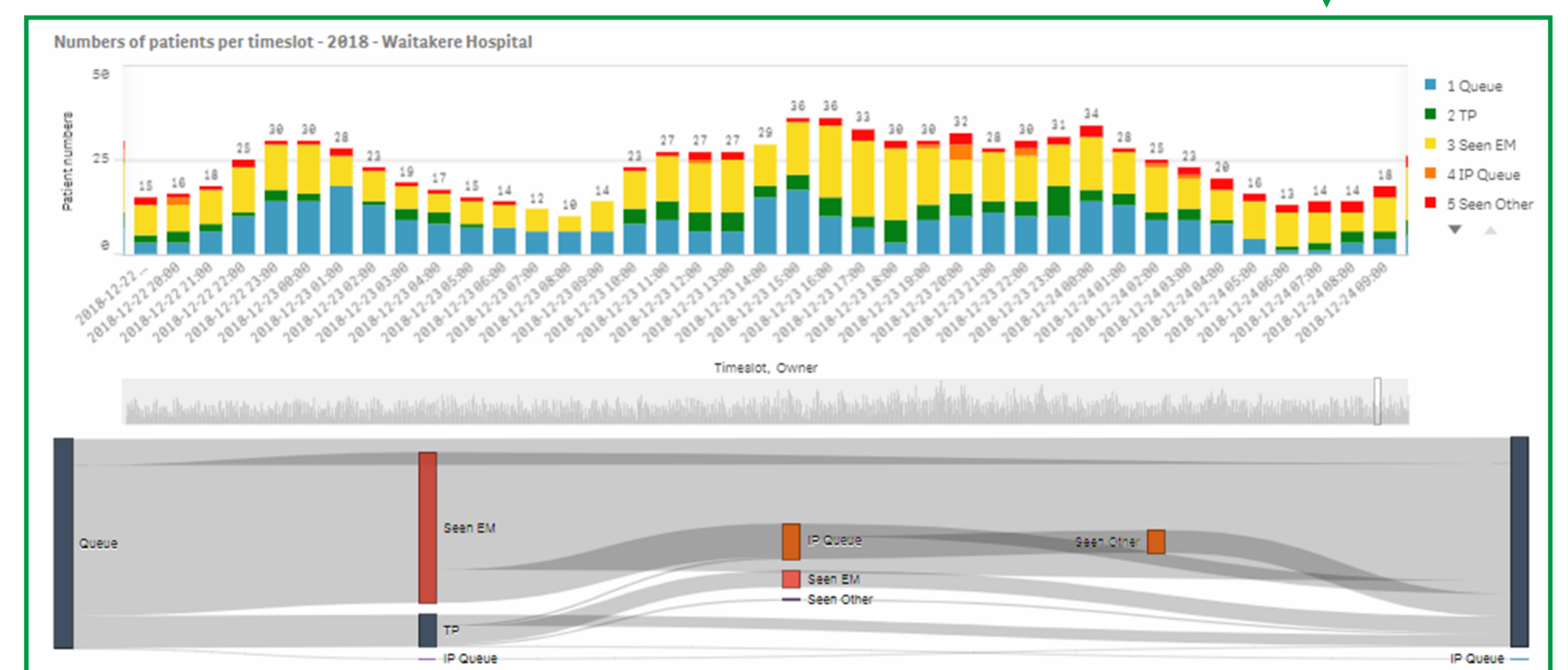
With also introduced SPC charts which allow us to identify if there is an unusual increase in length of stay on a particular day/week and compare this to the number of presentations, queue time, and clinician dwell time (time from triage to disposition decision) to better understand the potential cause.

Results	XR	Name	BP	S / A	TC	Arrival	Spec/ Doc	Status	Notes	Presenting Complaint	TP	Loc	LOS	
Seen 14:14							EM S/D	Seen 14:14		Diarrhoea		PAE06	00:40	
Seen 13:39							EM S/D	Seen 13:39		Fatigue		PAE09	00:58	
Seen 14:02							EM K/S	Seen 14:02		Stomach Problem		WRP42	01:48	
Seen 13:49							PAED/ C/S	Seen 13:49		Diarrhoea, Vomiting		BCB Paed Rehydration	PAE07	01:56
Seen 12:55							EM K/S	Seen 12:55		Laceration/Abrasion		WRADLT	02:01	
							EM			Electrodes		AC03	01:35	
							EM			Cough, Shortness of breath		BCB Adult Asthma	AC04	00:44
							EM MT			Sepsis		AC00B	10:14	
							EM			Abdominal pain, Haematuria, 19/40		AC01	02:04	
							Med F/T	Seen 00:32		LRTI		YE		
							Med J/D	Seen 10:36		Chest Pain other, cough		TYAD03	00:14	
							Med J/D	Seen 11:21		Dr Return, for antibiotics		YVWAT	03:30	
							Med J/D	Diagn 11:58		Chest Pain possible cardiac		YB4		
							EM			Abdominal pain, PR bleeding		AC02	01:33	
							Med R/P	Admit 19:38		Unwell adult, Vomiting, Lethargy		YQ		
							Med C/T	Seen 13:02		Chest Pain possible cardiac		YD1	00:54	

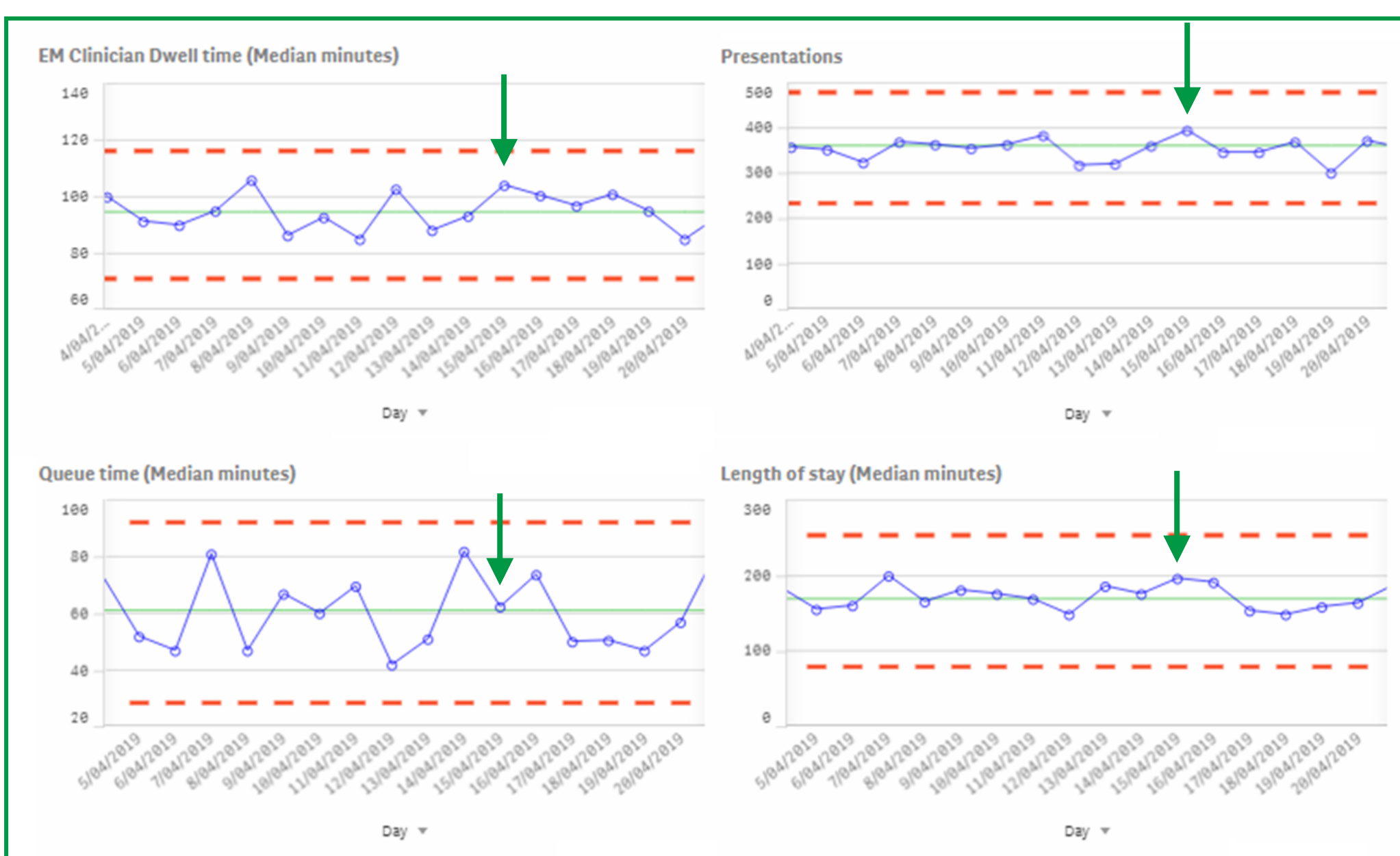


Timestamps mapped to 13 patient pathways

Visualised as hourly workload + overall patient pathway



Single patient journey



### DISCOVERIES

- Clinicians are helping us improve data quality + fix system issues, eg we found a field was no longer being populated following a system upgrade after clinicians challenged the data
- Clinicians from other specialties are able to easily identify patients for clinical audits by searching in discharge summary table



### ACHIEVEMENTS

- There is an increase in self-reflection + self-directed learning amongst clinicians
- Different groups are coming together + having conversations with the same data - clinicians, managers, finance, executives
- New costing model developed due to visibility of patient pathways in the app



### AUDIENCE

Relevant to clinicians + management across the organisation who are directly involved with patients in ED or who started their journey in ED



### DATA AND ADVANCED ANALYTICS

- iPM:** Patient journey, inpatient, ED events, ICD coded data
- EDS:** discharge summaries
- Whiteboard:** clinician whiteboard actions